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ABSTRACT

This working paper is an overview of the status of population education in early 1972. It is defined as a program which provides for a study of the population situation of the family, community, nation and world, with the purpose of developing in the students rational and responsible attitudes and behavior toward that situation. It is independent of sex education, family life education, and environmental education; related in the sense that each developed as a result of social change and social needs. The approach and attitudes to population education has a recent history, but the real concern in some nations has provided the impetus to develop various programs. An examination of programs in several countries shows difficulties encountered and reveals varied approaches. National attitudes and support, non-flexible and established educational programs, out-of-school influences (as from religious groups), medical programs, and educators all have had effects on a given nation's efforts, both negative and positive. Integration into existing curriculum is a common approach, with educators being charged with the responsibility. An international approach through an agency such as UNESCO could provide unifying aspects among countries and eliminate duplication of effort. Proper population education should enable each student to make an individual and responsible decision regarding family planning. (Author/JMB)

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POPULATION EDUCATION IN THE SCHOOLS:

STATUS AND NEEDS

A Working Paper for the Ford Foundation

May 1972

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Note: Portions of this paper are revisions of a manuscript that Sloan Wayland and I are preparing reporting on a world survey of population education programs. I wish to acknowledge my debt to him, while assuming full responsibility for the liberties I may have taken with portions of that manuscript that he drafted.

Comments and reactions to this paper would be appreciated.

This is a working paper. In it I have tried to indicate where we are in the field of population education at this point in time -- spring 1972 -- and to indicate some of the issues that are relevant for consideration by the Ford Foundation and others in deciding on program strategies for support of the field in the months and years to come. The paper is divided into eight parts:

1. What is population education?
2. Why population education?
3. What is population literacy?
4. What is the relationship between population education, sex education, family life education and environmental education?
5. The status of population education.
6. The process of developing population education programs.
7. The role of international agencies.
8. A concluding, cautionary note.

The term population education, as used here, refers exclusively to education within the formal school system and particularly primary and secondary schools, and teacher training institutions. Primary attention is directed to Africa, Asia and Latin America, with reference to the United States included only when it relates to the development of programs overseas.

1. What is population education?

There is at present no universally accepted formal de-

finition of population education. The Asian Regional Workshop on Population and Family Life Education, convened by UNESCO's Regional Office in Bangkok in September 1970, adopted the following as "a succinct description of what the Workshop would like to see population education achieve":

> Population education is an educational programme which provides for a study of the population situation of the family, community, nation and world, with the purpose of developing in the students rational and responsible attitudes and behaviour toward that situation.

A review of the materials from the various national and international groups now working in the field suggests some common elements, even though the definitions may differ in detail or emphasis. They are:

1. The focus is on an understanding of the relationship between population dynamics and the quality of life both for the individual and the society.

2. Attention is directed to the individual, the family and the community, as well as to the nation and the world at large.

3. The process is education, not indoctrination or propaganda.

4. There is a focus on both the cognitive and the

affective; a concern for knowledge and the learning of skills, as well as the exploration of values and attitudes.

5. The content is multidisciplinary or interdisciplinary, drawing on concepts and data from many subject areas. Demography is an important source, but population education is not demography for children.

6. The selection of the concepts and data to be included and excluded is determined by the specific goals and objectives of the program, and by the cultural and educational traditions of the country. For example, human reproduction is included in many programs as being clearly relevant to the goals of population education, whereas social relationships in family life and human sexuality in a broad sense are excluded as of marginal concern, even though they are legitimate areas in their own terms.

7. Concern is expressed, in principle, for the whole range of population factors, such as migration, age structure, infant and maternal mortality, and distribution, in spite of the popular focus on rapid population growth as the key issue.

8. The concern for "rational and responsible" behavior and attitudes is defined in terms of developing an understanding of the consequences of the individual's own behavior for himself and for society.

9. The goal is often defined as motivating students, when they reach adulthood, to take advantage of advances in fertility control, to make family planning a way of life,

thereby obviating the necessity for governments to use coercive measures in order to achieve population limitation. In addition, the traditional citizenship role of the schools is emphasized in terms of the student developing an understanding the relationships that exist between population and public policy.

10. Particular attention is directed to the student's own miiieu -- his village, city, state and nation -- indicating the distinctive processes at work that are, or might become, most familiar to him.

11. School educators are increasingly recognizing the value of population education among out-of-school youth and among adults as complimentary to school programs.

12. Finally, the term population education is used to describe a primary and secondary school program that is well planned, systematic and integrated, as opposed to a random inclusion of population information in the curriculum. College level work is not usually included.

Having suggested a number of commonalities in definition it should be noted that in practice many programs stray from the course they have set for themselves. Thus, although concern is expressed for the whole range of population factors (7) the content of most programs emphasizes growth and fertility-related factors to the exclusion, for example, of migration and distribution. Similarly, although the stress is placed on education rather than indoctrination (3), many programs emphasize the advantages

of the small family norm rather than the advantages and disadvantages of various size families.

2. Why population education?

Interest in the development of population education programs arose in large measure in response to a growing concern about the consequences of population growth first in the developing world and more recently in the developed world. Population education has been seen as one of a number of "beyond family planning measures" to make family planning a way of life. As a result fertility has become the key variable for study. And since the early advocates of population education tended to be family planning or population specialists rather than educators there has been slow acceptance of these programs within the already overcrowded curriculum of the formal educational system.

Justification for the development of population education programs need not rest solely on the perception of and concern for problems arising as a result of population growth and change. A review of some recent studies of American students' knowledge of and attitudes toward population matters shows that:

1. students express concern about the seriousness of population growth in the world and, to a somewhat lesser but still significant extent, in the United States;

2. students, by their own admission, and on the basis of testing, know very little about population regardless of the measures used to assess knowledge;

3. students indicate that the media, rather than the schools, are the most important source of their population information;

4. students are unaware of actions that might be taken either individually or collectively to deal with population problems; and

5. students lack many of the learning skills, such as graph reading, necessary to understand basic population concepts and data.

The gap between the students' concern and their knowledge offers sufficient justification for the development of population education programs, assuming that one of the functions of the formal school system is to assist students to achieve informed concern. Although fully comparable data along the five measures suggested above are not available from other countries, a number of more limited studies suggest that the situation in the developing world is not too different from that in the United States.(1)

Finally, population education can be justified on purely intellectual and educational grounds. The characteristics of a population and the changes that occur in a population touch upon all of our lives, whether we believe our country to be overpopulated or underpopulated. If it is educationally valid to study animal populations within the biology course of study, as is the case throughout most of the world, then it is equally valid and important that we include the study of human populations in our

science, social studies and humanities curricula. Population can be approached not as a problem to be solved, but as a phenomena to be understood. Approached in this way it is no more sensitive than anything else that might be learned in the schools. If differs from much else that is taught only in the sense that it may be more relevant to the students' own lives, both now and in the future. The subject matter is valid whether or not the process manifests itself in terms of some particular behavior, such as lowered fertility. Furthermore, raising the level of population literacy should contribute to the creation of an atmosphere and a forum in which this important public issue can be discussed and debated.

3. What is population literacy?

As indicated above, the content of population education programs will be determined by the stated goals and objectives of the national program, as well as the cultural and educational traditions of the country. Therefore, there is no universally agreed upon list of concepts which are common to all population education development efforts. However, there is some agreement on what a student might be expected to know having completed a primary and secondary school program in population education.

The first set of understandings encompasses the basic knowledge needed to assess the importance of population change for himself and his community. It involves the definition of a problem, and particularly population problems. The second

and third set of understandings deal with actions that he may participate in in order to deal with population problems as he and the society perceive them. Although these understandings are stated in cognitive terms it should be understood that attention to values and attitudes is intended throughout.

1. A student could be expected to have developed some basic understandings of population characterisitcs and population processes, including the determinants and consequences of population change. This would include a study of population in history and today; an introduction to the tools and concepts of the demographer; and an awareness of the social, psychological, environmental and economic influences on population change. The student would also be introduced to the social, psychological, environmental and economic consequences of population change, both for his nation and the world, and for himself, his family and his community. As a result he could better understand why personal and societal decisions made today have an impact many years in the future. He will also have explored the advantages and disadvantages of various family size norms for himself and his community. He will be aware of the relationships that exist between population size and distribution, and the quality of life, including the evolution of social and environmental problems. He will know that population growth in the world today results primarily from declining death rates, rather than increasing birth rates.

2. A student could be expected to have developed some

basic understanding of the interactions between population variables and public policy. As a result he will be aware of national and international programs designed to deal with population problems as they are perceived in his country and in the world. He could better understand how various societal actions, such as a change in the role and status of women, or a change in the tax structure, or expansion of educational opportunities might affect the population situation in the country. He will also have explored the ways an individual's desires and needs may coincide or come into conflict with the society's desires and needs and the processes that are open to adjudicating conflict when it arises. He will also have explored the ethical aspects of population policy.

3. A student could be expected to know that family size can be controlled. He could be expected to understand the processes of human reproduction, the consequences of his own fertility behavior for himself and the community, and the services available to assist him in planning his family if he so chooses.

A fourth area of concern -- basic values -- has been suggested by Ozzie Simmons and others. This is not included as a separate area of concern because the exploration of values is a fundamental aspect of the exploration of all of these content areas. The concern should be with knowledge as well as attitudes; with the cognitive as well as the affective domain.

4. What is the relation of population education to sex education, family life education, and environmental education?

Population education is neither sex education, nor family life education, nor environmental education. Each of these fields admittedly shares an area of affective concern. As with all good education their goal should be to assist the student to develop an ethic of responsible action, of individual and social responsibility, defined as foreknowledge and understanding of the consequences of action and inaction. But their goals in terms of the knowledge and skills to be learned are different despite the fact that there are shared bodies of content where each field may overlap the interests and concerns of the other.

The demand for population education arises from a particular set of historical circumstances and in response to a particular set of contemporary issues. These circumstances and issues have defined the nature and objectives of the field. Different circumstances and different issues have defined the nature and objectives of sex education, family life education and environmental education.

Sex education in the United States and Europe developed in response to a concern for changing sexual mores and behavior, and in reaction to an increase in the incidence of veneral disease and out-of-wedlock pregnancies. The content of sex education programs includes male and female anatomy, the physiology of human sexuality, and the ethics of sexual behaviors. Matters of human

reproduction would be of concern to the population educator, but veneral disease and masturbation are of only peripheral interest.

Family life education in the United States grew out of a recognition that much poor academic performance among students arose as a consequence of personal and family conflicts, and out of growing evidence of family instability. The content of family life education includes facts, attitudes and skills related to dating, marriage, parenthood, and later life. Matters relating to age at marriage would be of concern to the population educator, but issues relating to retirement would be of little interest.

Environmental education is a relatively new field of concern for educators in the developed world having its roots, however, in the long history of conservation and outdoor education. As nations became increasingly urbanized attention began to be focused on manmade as well as natural environments. Primary attention in environmental education is directed to the biophysical environment, man's impact upon it, and its role in contemporary society. Enviornmental educators and population educators should both concern themselves with the relationship between population size, population growth, population distribution and environmental deterioration and resource depletion. But for population education to be subsummed under the environmental education rubric, as has been advocated by some, would be an injustice to the goals and purposes of the field, and to its content.

Thus, for example, certain social system variables of considerable interest in population education, such as the role and status of women or the effects of education on fertility, would be likely to receive little attention since they are only peripherally related to environmental concerns. The synthesis of knowledge that might permit a meaningful and intellectually valid combination of population and environmental education has not yet been achieved. Combination of the fields at this time would require compromises that would be unacceptable to both in terms of content and viewpoint.

In planning for educational change we often spend too much time looking backward to find roots for what we are doing before looking ahead to define our goals and objectives. This often leads to a confusion of goals and to a tendency to assume that certain fields are the same -- such as population education and sex education -- just because they may share to some small degree some content areas. As Sloan Wayland has suggested, paraphrasing McLuhan, we should not look ahead through a rear-view mirror.

5. The status of population education in the world.

A review of school books and curricula around the world would undoubtedly show that virtually all countries include population information in their school programs. The inclusion of these population materials and concepts is, however, by

chance rather than by design, and is random rather than planned. The information serves goals that may be complimentary to those of population education, but which are in the final analysis different. Population education, by definition, is a program which is planned, integrated, and sequential.

The idea of developing population awareness through the schools is fairly recent. In 1943 two American demographers directed the attention of social studies teachers in the United States to the problem of population, and to the potential role of the schools in improving knowledge and understanding. With a population of 135,700,000 concern arose from the fact that a decline in population size was being projected for the western world. However, no programs appear to have developed as a result of their effort.

Philip Hausers' 1962 article, "Population -- Gap in the Curriculum," came at a time when the focus had changed from the United States to the world, and to problems of growth rather than decline. But it appears to have attracted little attention at the time, although it is now often cited as the beginning of a movement. Actually it is from the mid-sixties and the work of Sloan Wayland that sustained interest in the development of population education can be dated.

Formal work in population education had its beginnings in Asia, and a number of countries on that continent represent

the furthest development of the field to date. Since many Asian countries were among the first to recognize and accept population as a problem, and to mount national programs designed to deal with the problem, it is not surprising that they should also have been first to develop school education programs as part of or as a supplement to a national population policy.

India was among the countries to accept the challenge of school education about population. The initial interest and impetus came not from the educators, but from the government and private family planning programs. A number of seminars helped to focus attention on the subject, and provided impetus for governmental action leading to the development of a Population Education Cell within the Ministry of Education's National Council of Educational Research and Training (NCERT). The Family Planning Association of India, through its national headquarters in Bombay and through a number of its state affiliates, has continued to play an active role in the field, as has the Central Health Education Bureau in the Ministry of Health. At the same time the NCERT program has flourished, and is extending its efforts into the states. Interest has also developed in a number of universities and teacher training institutions, and through the federation of teachers, providing a fertile climate for a diversity of approaches to this new field.

Iran was also one of the first countries to express an interest in school education. By the end of the sixties the Family Planning Department of the Ministry of Health was able to convince

its colleagues in the Ministry of Education that population materials should be included in the texts. But problems of cross-ministerial communication and too little attention to educating the educators (thereby gaining their active support rather than passive acceptance) has resulted in a program that has not yet reached a takeoff point.

In Korea the Central Education Research Institute assumed early responsibility for the program development effort. Careful studies of texts already in use, and of students' and teachers' knowledge of and attitudes toward population concerns, are providing important baseline data for curriculum and materials development which was begun in 1971. The regularly scheduled revision of primary school social studies texts in the summer of 1972 is providing an opportunity for the inclusion of population materials.

The Philippines is already characterized by a diversity of approaches, both in terms of institutional settings -- private, university-based, and within the Ministry of Education -- and in terms of subject matter -- ranging from traditional sex education through to population education, in the sense of the term used here. Efforts toward coordination of the various approaches are being planned through a sizeable project grant from UNFPA.

Indonesia's newly developing program is extensive, attempting to coordinate educational programs both in and out of school, each being supportive of the other. Planned programs are being developed both through the Ministry of Education, and through

the private schools of the Muslim Association.

Whereas in many countries population education programs have focused almost exclusively on the social studies and the social sciences, in Nepal the natural sciences have been the vehicle for program development. There, sequential population learning experiences have been included as part of a general revision of the primary school science curriculum.

Late in 1971 and early in 1972 seminars and workshops in Thailand, Malaysia, and Ceylon brought together population specialists and educators as the first step in the development of a population education concern within the educational community.

In Latin America population education has been slow to develop largely as a result of the strong Catholic influence and controversy concerning the meaning and consequences of population growth for national development. Population education is viewed by many as population control education. Although this is not, or need not be, the case, political problems are often raised when it is discussed.

The Chilean program represents an interesting case. Interest in the systematic inclusion of population concepts and data in the curriculum did not arise as part of a national or private population or family planning effort. Rather, it developed as a result of the interests and competencies of specialists who were involved in the revision of the national social studies curriculum that began in the mid-sixties. Emphasis in the pro-

gram has been on the development of demographic and population-related concepts that will help the student to understand the socio-economic causes and consequences of population change. Education, not propaganda, is clearly the goal. The concept of the program could hardly offend the staunchest supporter of population growth.

In Colombia, leadership in the development of population education has been assumed by the Population Division of the highly respected Colombian Association of Medical Faculties (ASCOFAME), and by a group of educators and specialists at the University of Valle in Cali. ASCOFAME has focused exclusively on sex education, but has recently indicated an interest in including "demographic education" in their program. At Cali an attempt is being made to integrate population, sex and ecological education into one package that is educationally sound, responsive to perceived societal needs, and politically acceptance. Through their efforts, which are separate but complimentary, they hope to train teachers, and develop curriculum and text materials that will be acceptable to the Ministry of Education.

With the exception of these efforts, population education is more argued than practiced in Latin America. Primary emphasis in most countries has been on the development of sex education programs, usually with the support of the Catholic hierarchy. The focus is less on the individual's responsibility for his actions, or on the consequences of population growth, than it

is on solving the problems created by high rates of out-of-wedlock pregnancies, illegal abortions, and venereal disease. Within a Latin American context these are important and real problems, and the development of sex education programs as a response is valid and important. It is questionable, however, whether these programs, devoid as they are of population content, can serve as a reasonable response to the need for greater population awareness necessitated by high rates of population growth, heavy migration from the countryside to the city, and problems of economic and social development.

Only one country in Africa -- Tunisia -- has become involved in the development of a population education program. There a small group of educators, working in the Institute of Educational Sciences of the Ministry of Education, is attempting to develop population awareness materials for the primary grades.

Some sub-Saharan pan-African educational organizations, including the African Social Studies Programme and the Science Education Programme for Africa, have recently expressed interest in the systematic development of population materials for the schools, but this represents an opportunity for the future rather than an on-going program.

Despite increased levels of activity in the last few years there is as yet no national or local population education program that is fully operational. Very few of the programs have materials already in use in a large number of classrooms, and none has a usable sequence that covers the span of primary and secondary schooling. It

may be some years before a full program exists.

As population education programs have developed a number of characteristics have emerged. Some of these are :

1. The infusion or integration of population content where relevant into existing courses of study is seen more often than the development of special population courses. Integration takes the form of new units within existing courses or revision of the content of units currently offered. This approach is justified on the grounds that the curriculum is already too crowded to add new courses, and on the assumption that content spread throughout the entire period of schooling will be more meaningul than the single course.

2. Attention at the primary school level is directed toward developing an awareness of population change within the students' most immediate environment, including the family and the community. Content concerning both animal and human populations is generally included. Materials tend to be descriptive.

3. Attention at the secondary school level becomes more analytical, focusing not only on information but also on the causes and consequences of population change and on possible societal and individual actions. The scope is national and world-wide as well as local.

4. Although the national programs ultimately intend to provide learning experiences at all grade levels, initial attention has generally been directed toward the middle and secondary school.

This probably results from the greater knowledge that is available to curriculum planners about macro-aspects of population change, and the fact that the content for this age level is closer to traditional demographic and population study offered at higher educational levels. Given the high drop out rates from primary schools considerable concern is expressed with teaching population at this level, but the materials for doing this have not yet been developed.

5. Teaching of population in the classroom is left to the regular classroom teacher rather than to a specialist since the materials are being integrated into the regular curriculum. Problems of pre-service and in-service teacher training are in the process of being worked out through experimental programs, as in the Philippines and India.

6. Much of the integration of population concepts and data occurs in the social studies. Mathematics and natural science curricula are also being explored, as are programs in home economics and reading. The problems of effectively integrating population content across disciplinary lines are yet to be worked out.

7. Some programs have made a special effort to collect data on students' and teachers' knowledge of and attitudes toward population matters as a basis for curriculum and materials development. Other research activities are limited.

8. Efforts to emphasize the individual and family stake in population dynamics are hampered by the paucity of solid

scholarly research in this area. Little is known about the impact of family size on family well-being, for example.

9. The selection of the content to be included is being approached in the same manner used in other instructional areas, based largely on the goals and objectives of the program. Interest on the part of some in the society in population education as a direct population control measure has presented potential problems of indoctrination. Most leaders in population education, however, are committed to a pedagogically sound approach.

10. The development of population education programs has usually necessitated collaboration between the Ministry of Education and a number of other governmental and private agencies, including the Ministry of Health and the Family Planning Association. In some instances this has created problems of interagency rivalry.

12. Many programs assume that learning is most effective when the student is actively involved in the process. Problem solving techniques are often emphasized as the process of instruction.

13. There is growing recognition among school educators that population learning also takes place outside of school, for example through public campaigns directed to the adult population, and through the activities of family planning visitors to the villages. Building upon this out of school learning presents a challenge to the school educators.

6. The process of developing population education programs.

It is not unusual for educators to be charged with responsibility

for developing school education programs in response to national concerns and crises. In the United States, for example, schools are now being asked by their communities or by special interest groups to develop programs in urban studies, ethnic studies, global or area studies, sex education, driver education, drug education, family life education, and environmental education, among others. Thus if educators here and abroad do not respond immediately to a call for population education their reaction must be understood in the context of these other pressures. How schools can and should react to all of these demands is an important question facing the education community today. For in addition to the broad range of demands for educational innovation educators in the developing world are faced with the urgent need to upgrade the quality of instruction, and also to the extend educational services to sectors of the school age population not now being reached. The suggestion that the entire educational system be revamped to take into account all of these "problem" areas and needs has considerable appeal to many, but is probably highly unrealistic.

In many countries there are a number of factors working in support of the development of population education programs. First, there is a fairly widespread public concern over the consequences of rapid population growth. And even in those countries where discussions of population growth raise political issues, such as in much of Latin America, concern with the problems

created by vast rural-urban migrations may provide a climate in which population education can be discussed. Second, educators are becoming increasingly aware of the effects of population growth on their ability to provide education to growing numbers of children in accord with established national educational development goals. Finally, the interest of a number of international and intergovernmental agencies in the development of population education programs, and the availability of earmarked funds for this purpose, often makes action possible without requiring the shifting of scarce funds from existing programs.

The initial impetus for the development of population education programs has not usually arisen within the Ministry of Education. In most countries the private or public family planning programs has taken the lead. The first step then was to educate the educators.

Consciousness raising in most of the countries now involved in population education programming has taken the form of a National Conference or Seminar. This has been the pattern in Ceylon, Chile, Colombia, India, Indonesia, Iran, Malaysia, The Philippines and Thailand. Involved in these meetings were education officials at national and regional levels and from teacher training institutions; specialists in demography and population; representatives of the public and private family planning programs; influential persons from other sectors of the society both public and private, religious and secular, whose support and understanding were deemed important; and

often resource people from national programs in other countries or from international agencies.

The substance of these seminars has varied somewhat, but certain elements can usually be found in them all. First, attention was directed to the population situation in the country and the significance of population change for the future development of the society. Particular attention often has been focused on the impact of demographic change, including growth and migration, on the educational system itself. Second, private and governmental programs to deal with the population situation in the country have been discussed. Third, the present status of school programs that are related to population education are discussed, and the population content of already existing school programs reviewed. Finally, various courses of action have been considered in which educators can engage in the development of population education programs.

The recommendations that have been formulated by these seminars have addressed themselves broadly to the goals and objectives of the program being proposed and have served as guidelines for those decision-making bodies and educational leaders charged with responsibility for educational policy and planning within the society. The publication and dissemination of the proceedings of these seminars have broadened the impact of these meetings, and have served as basic reference documents for initial program development, both in the country and in other countries.

In Asia, where there has been a greater commitment of educators to the development of population education programs than in Latin America and Africa, the National Seminars have called for the development of a special population education unit within the Ministry of Education, or one of its affiliated institutions. To this unit responsibility for the planning, development and implementation of the program has been assigned. Since population education cuts across disciplinary lines, all levels of the educational system (including teacher training), and involves research and evaluation as well as curriculum and materials development, there has not been a natural or logical place to locate the unit. The staff must work with and through exisiting units which are responsible for various grade levels and disciplinary concerns. They must be responsible for the coordination of activities in order to insure progressive and consistent program development.

Once the organizational arrangements are completed the plan for implementing this educational innovation must be developed. In some aspects it will be comparable to other innovations being introduced into the system. However, since it is likely that the decision will be made that population should be integrated within the existing curricula structure, rather than developed as a totally new subject area, this innovation will take somewhat different forms than a revision of, for example, the existing social studies program. Also the possible availability of long-term funding

from outside sources may make long-term planning more possible than is often the case.

The responsibilities of the population education unit might ideally include the following:

1. Specification of the goals and objectives of the program.

2. Preparation of proposals for funding both from national and international sources.

3. Determination of staff needs both in terms of numbers and types of personnel, including long-term and short-term advisers from other nations.

4. Continuous education of educators at all levels of the system in order to sustain interest and support, including the teachers without whose cooperation the program has little likelihood of success.

5. Determination of research needs both in terms of program content and in terms of program delivery, and the assignment of responsibility for developing the necessary data and information.

6. Development and implementation of a strategy for formative and summative evaluation.

7. Development of pilot project areas for field testing of units as they are developed.

8. Development of a basic approach to curriculum development, both in terms of the educational processes to be used and the grade levels to which initial attention will be directed.

9. Determination of the need for different curricula to

meet the needs of different segments of the school population, such as rural-urban, boy-girl, and the particular needs of racial or ethnic sub-groups.

10. Preparation of curriculum and text materials for student and teacher use.

11. Specification of programs for pre-service and in-service education of teachers, teacher-trainers, and other specialists.

Two different approaches to curriculum development can be derived from the experience to data. One makes use of a two to four week workshop bringing together experienced teachers from different regions of the country, representing different grade levels and disciplinary interests. The participants usually have no prior background in population which is presented to them at the workshop. Working in small groups, with frequent plenary sessions, they develop drafts of units which they field test upon return to their schools. They are then reconvened at some later date to review the experience and to revise and expand upon their original efforts. The Philippines and Indonesia have proceeded in this way.

The other approach relies upon professional curriculum development specialists who prepare the initial drafts of materials in consultation with classroom teachers. These are then field tested and revised. India and South Korea have adopted this approach.

The diffusion of materials, once they have been approved

for general use by the Ministry of Education, is carried out through the centralized mechanisms that usually exist for this purpose.

It should be noted that no country has, as yet, gotten to the point of systemwide diffusion. The process of curriculum development, testing, and revision is a slow one, even when substantial resources are devoted to it. Since most national population education efforts are less than two years old it is not surprising that population materials have yet to pervade the school system of any nation. It is estimated that program development will probably require approximately five years.

There is general agreement among specialists in population education that programs must be country-specific. Materials developed in one country are not likely to be usable in another country without considerable reworking. What can be learned are the advantages and disadvantages of different processes for materials development and teacher training. There can also be some sharing of research and evaluation designs and possibly of the findings of research.

Wherever possible the persons to be involved in the development of population education programs should be trained within their own countries, or within their own geographic regions. Most countries have or are in close proximity to other countries where study programs exist that can offer special population content training to the leaders of population education programs. Regionally developed workshops should be used to train program

development specialists who would then be responsible for the development of in-country training programs for the specialists who will be needed, using both indigenous and foreign experts as necessary. Persons to handle the research and evaluation functions in these programs might also benefit from regional workshops. In some cases long-term overseas training, possibly for a degree, may be advisable for persons slated to play a very key role in the development of the programs. Such long-term degree programs are not, however, responsive to the urgent need that is felt in most countries for persons to begin work immediately. In addition, it must be noted that there is a dearth of institutions anywhere in the world interested in and capable of providing systematic training in population education.

7. The role of international agencies.

Up to this point attention has been focussed on activities necessary for the development of population education programs within single countries. In this section attention will be focussed on the activities that might be undertaken regionally or internationally in order to expedite and assist the development of national programs. These activities are in addition to financial support for in-country activities.

Within a geographic region comprising a number of countries that share certain educational and cultural traditions programs should be developed to meet the following needs:

1. Provision of training opportunities for leaders of national

programs, primarily through short courses and workshops on program development, curriculum and materials development, teacher training, and research and evaluation.

2. Development and support of mobile teams of specialists from within and, where necessary outside the region, to assist with the provision of in-country training opportunities similar to those listed above, but for persons at lower levels of the educational system.

3. Maintenance of a directory of population education specialists within the region, as well as funds to support their use as short-term consultants in order to expedite program development. This would include the provision of technical services to national curriculum development projects, including accuracy checks for materials developed in countries where qualified demographers and other population specialists are nonexistant or in short supply.

4. Development of a repository of teacher and student materials from the region and from other parts of the world, and a mechanism for reporting on these materials to specialists within the region.

5. Development and adaptation of research and evaluation instruments and projects.

6. Convening of regional seminars and conferences on special problem areas, such as teacher training or evaluation, as necessitated by developments within the region.

7. Collection and dissemination of teaching aids, including audiovisual materials.

8. Translation and dissemination of important materials on population and population education from other languages.

9. Preparation and dissemination in popular form, for teachers and other lay audiences, of the products of demographic and population related research done at population research centers and universities throughout the world but applicable to the region.

The development of curricula materials is explicitly omitted from the above list in the belief that such materials are most effectively developed at the national level, taking into account local conditions, traditons and needs.

Regional centers should be developed as soon as possible to respond to the needs of programs and to stimulate their development. At least four centers should be established initially: in Latin America, in sub-Saharan Africa, in North Africa or the Middle East, and in Asia. The establishment of centers for even smaller cultural regions would be preferable but may not seem indicated at this juncture.

Wherever possible, such centers should be established as part of already existing institutions whose interests are amenable to the addition of population education components. The recent addition of population education officers to UNESCO Regional Offices for Education in Bangkok, Dakar and Santiago represents a potential beginning for regional centers. However, it appears at present that the functions of these offices will be more circumscribed than that proposed here. Other possibilities in addition to or

instead of the UNESCO Regional Offices would include: regional institutes already supported by UNESCO, such as the Asian Institute for Teacher Educators (Philippines), or the Arab States Center for Educational Planning and Administration (Lebanon); or major national centers that might add a regional component, such as the Center for Training, Experimentation and Pedagogic Research (Chile), or the National Council for Education Research and Training (India). The latter might be considered as a model for regional centers to the extent that it is presently serving many of the functions for the states of India that are proposed on a regional basis.

Each center should have attached to it one or more specialists who spend as much as half the year travelling within the region in order to stimulate interest in population education, assist in the development of proposals for international funding, help in the planning of national seminars and other efforts to enlist support for the program, and follow-up on efforts to expedite their development. The regional specialists would also participate in regional meetings of Ministers of Education and other education groups with a view toward gaining support for population education in those settings.

The limited number of persons now capable of providing leadership in population education at the national and regional level will affect the timing with which the proposed centers and other programs can be established. Accordingly, identifying

and developing an international cadre of specialists, without weakening existing national programs, is a matter of high priority, but results cannot be expected "immediately".

During the last few years a number of international agencies have added staff members who devote some portion of their time to the development of population education around the world. These include the Carolina Population Center, the Center for Studies in Education and Development at Harvard, the Colombo Plan, the Ford Foundation, the International Planned Parenthood Federation, the University of Michigan, Pathfinder Fund, the Population Council, Teachers College of Columbia University, UNESCO, UNFPA, and the US Agency for International Development. Given the complexities of the programs suggested, and the potential sensitivity involved in the development of population education a central international responsibility is needed to stimulate, promote, guide, supply, and support the overall effort.

UNESCO is the natural agency to assume this responsibility. It has international status, it has related programs in education, it has wide contacts in education ministries, and it has been assigned this task by an Expert Committee (1967) and by the General Conference itself (1968 and again in 1970). To date, however, UNESCO activity has been quite limited, and there are recent indications that they will not be prepared to assume leadership in this field until 1973 or 1974.

In the interim period it is important to insure that there is cooperation and collaboration rather than competition between

the international funding and assistance agencies. To this end a meeting of the interested agencies might serve to delineate the scope of their contributions, both financially and substantively. This group might then survey the needs for program development in Asia, Africa and Latin America and through their combined efforts insure the availability of the necessary funds and other assistance. Even if it is still not possible for them to assume leadership in the field, UNESCO or the UNFPA should serve as the convenor of this donor/assistance group in order to proceed with international program planning.

8. A Concluding, cautionary note.

Dissatisfaction with population education programs is likely to occur unless there is a clear understanding of their goals and objectives from the very beginning of the development process. According to my own values, developed within an American context, I believe that the role of the schools is to present information, to challenge the student to explore the meaning of the information in terms of his own values and attitudes, and to challenge him to reach conclusions concerning his own behavior when the consequences of this behavior are viewed in light of the information he has available to him. I do not believe that the schools should reach conclusions for him. Thus, I would argue for population education programs that explore the advantages and disadvantages of various size families, rather than those which set as their goal the acceptance of the small family norm. My values would lead me to develop a population education program in such a way

that the child might decide to have a large family, after considering the consequences for himself and his society. I would argue that students are perhaps more likely to make societally correct decisions in open-ended programs, than if they are simply told what is societally correct.

Whether this open-ended approach is viable and valuable in the developing world is a matter for each country to decide for itself, depending upon the values and traditions of the educational system. These must be reflected in the goals and objectives of the population education program.

There is no empirical evidence that population education content can and will affect fertility or even citizenship behavior in ways that those working for population limitation would like or find acceptable. The time gap between school education and adult action may be too long. Perhaps school education is too impersonal to have much impact on areas of such high personal concern.

Yet if we find virtue in rational behavior, and if we wish to avoid coercion, then school education in population matters is worth the effort. The schools exist and their support should be enlisted. Furthermore, the subject matter of population education is people and the future. What more interesting and important subjects are there for the schools to consider?

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NOTE

(1) The U.S. data was reviewed briefly in S. Viederman, "Population Education: Student Knowledge and Needed Research," paper prepared for the PAA meeting, April 1972. Examples of overseas studies include: M. Poffenberger, "A Study of the Knowledge and Attitudes of Groups of Indian and Taiwanese College Students Toward Family Planning and Married Life," Journal of Family Welfare, 18 (1), September 1971; T. Poffenberger, et. al. "Population Awareness Among Secondary Students in an Indian Village: A Preliminary Report," University of Michigan, August 1970; Central Education Research Institute, Project in Curriculum Improvements for Population Education in the Elementary and Secondary Schools of the Republic of Korea: The First Stage Report: 1971 Seoul, Korea: The Institute, 1971.